



Continuous Improvement in Cardiac Surgery Program (CICSP) Expansion

Release Notes

Surgery Version 3.0

October 2000

Department of Veterans Affairs
VISTA Technical Services

Table of Contents

| | |
|--|----|
| Introduction | 1 |
| Clinical Information (Enter/Edit) | 2 |
| Enter Cardiac Catheterization & Angiographic Data..... | 3 |
| Operative Risk Summary Data (Enter/Edit)..... | 4 |
| Cardiac Procedures Requiring CPB (Enter/Edit)..... | 5 |
| Resource Data | 7 |
| Postoperative Occurrences (Enter/Edit)..... | 8 |
| Print a Surgery Risk Assessment | 9 |
| Print 30 Day Follow-up Letters..... | 11 |
| ASA Classifications | 12 |

Introduction

This document defines the changes that will be seen by the user after installing the Continuous Improvement in Cardiac Surgery (CICSP) Expansion enhancement released as Surgery patch SR*3*95.

This enhancement modifies many options contained within the *Cardiac Risk Assessment Information (Enter/Edit)* menu. These include the *Clinical Information Enter/Edit*, *Enter Cardiac Catheterization & Angiographic Data*, *Operative Risk Summary Data (Enter/Edit)*, *Cardiac Procedures Requiring CPB (Enter/Edit)*, *Resource Data*, *Print a Surgery Risk Assessment*, and *Print 30 Day Follow-up Letters*. It also provides two new postoperative occurrence categories and two additional choices for ASA Classification.

IMPORTANT!! This patch adds functionality to capture the latest lab results for HDL, LDL, Serum Triglyceride, Total Cholesterol, Serum Potassium and Serum Bilirubin performed in the range of 90 days before and after the operation date. The capture of these lab results will occur automatically **at the time the cardiac assessment is completed**.

Since four of these tests, HDL, LDL, Serum Triglyceride and Total Cholesterol, are new tests, it is necessary that they be defined properly in the RISK MODEL LAB TEST file (#139.2). Follow the process outlined in the Laboratory information section of chapter four in the National Surgery Quality Improvement Program (NSQIP) Operations Manual to add the laboratory data names and specimen for each of these tests. Results for these four laboratory tests will not be accurate unless the process for adding laboratory data names and specimen is completed.

Clinical Information (Enter/Edit)

[SROA CLINICAL INFORMATION]

CLAMPETT, J.D. (421-67-6565) Case #63213 PAGE: 1
AUG 1, 2000 CABG (33536-66)

```
-----  
1. Height:                                14. Functional Status:  
2. Weight:                                15. PTCA:  
3. Diabetes:                              16. Prior MI:  
4. COPD:                                  17. Prior Heart Surgery:  
5. FEV1:                                  18. Peripheral Vascular Disease:  
6. Cardiomegaly (X-ray):                  19. Cerebral Vascular Disease:  
7. Pulmonary Rales:                       20. Angina (use CCS Class):  
8. Current Smoker:                        21. CHF (use NYHA Class):  
9. Creatinine: NS mg/dl                   22. Current Diuretic Use:  
10. Hemoglobin: NS g/dl                   23. Current Digoxin Use:  
11. Serum Albumin: NS g/dl                24. IV NTG within 48 Hours:  
12. Active Endocarditis:                  25. Preop Use of IABP:  
13. Resting ST Depression:                 26. Hypertension (Y/N):  
-----
```

Select Clinical Information to Edit:

Current Smoker

The definition for the “Current Smoker” prompt has changed for cardiac assessments.

For Cardiac Assessments, enter the code that coincides with information, either from the patient or the chart, that best describes the patient's use of tobacco in any form (e.g. cigarettes, pipe or cigar) prior to surgery.

- Enter 1 if the patient has never smoked.
- Enter 2 if the patient smoked within 2 weeks prior to surgery.
- Enter 3 if the patient smoked 2 weeks to 3 months prior to surgery.
- Enter 4 if the patient has smoked but not within 3 months prior to surgery.

Hypertension (Y/N)

A new prompt, “Hypertension (Y/N)”, has been added to the data entry option. This determines whether the patient has a history of hypertension and has used antihypertensive medication(s) on a regular basis during the 30 days prior to surgery.

Enter Cardiac Catheterization & Angiographic Data [SROA CATHETERIZATION]

CLAMPETT, J.D. (421-67-6565)
AUG 1,2000 CABG (33536-66)

Case #63213

PAGE: 1

-
1. LVEDP:
 2. Aortic Systolic Pressure:
 3. *PA Systolic Pressure:
 4. *PAW Mean Pressure:
 5. Left Main Stenosis:
 6. LAD Stenosis:
 7. Right Coronary Stenosis:
 8. Circumflex Stenosis:
 9. LV Contraction Grade (from contrast
or radionuclide angiogram or 2D echo):
 10. Mitral Regurgitation:
-

Select Cardiac Catheterization and Angiographic Information to Edit:

LV Contraction Grade

The response to the “LV Contraction Grade” prompt has been made more specific. The LV Contraction Grade Code III is replaced by IIIa (MODERATE DYSFUNCTION-A) and IIIb (MODERATE DYSFUNCTION-B).

Operative Risk Summary Data (Enter/Edit) [SROA CARDIAC OPERATIVE RISK]

CLAMPETT, J.D. (421-67-6565) Case #63213 PAGE: 1
AUG 1,2000 CABG (33536-66)

1. Physician's Preoperative Estimate of Operative Mortality:
2. ASA Classification: 3-SEVERE DISTURB.
3. Surgical Priority: ELECTIVE
A. Date/Time Collected: AUG 17,2000 08:10
4. Operative Death:
5. Date/Time Operation Began: AUG 1,2000 06:10
6. Date/Time Operation Ended: AUG 1,2000 07:30
7. Principal CPT Code: 33536-66
8. Other Procedures CPT Code:
9. Preoperative Risk Factors:
10. Cardiac Surgery to Non-VA Facility: NO

Select Operative Risk Summary Information to Edit:

Cardiac Surgery to Non-Veteran's Administration (VA) Facility

A new prompt, "Cardiac Surgery to Non-VA Facility", has been added to this data entry option. This determines if the surgery took place in a non-VA facility through a contracted arrangement, even if part of the post-surgical care is provided at the VA. Enter NS if location of procedure is not known.

Cardiac Procedures Requiring CPB (Enter/Edit)

[SROA CARDIAC PROCEDURES]

| | | |
|------------------------------|-----------------|---------|
| CLAMPETT, J.D. (421-67-6565) | Case #63213 | PAGE: 1 |
| AUG 1, 2000 | CABG (33536-66) | |

| | |
|------------------------------------|---|
| CABG Distal Anastomoses | 14. Cardiac Transplant: |
| 1. Number with Vein: | 15. Electrophysiologic Procedure: |
| 2. Number with IMA: | 16. Misc. Cardiac Procedures: |
| 3. Number with Radial Artery: | A. ASD Repair: |
| 4. Number with Other Artery: | B. VSD Repair: |
| 5. Number with Other Conduit: | C. Myxoma Resection: |
| | D. Foreign Body Removal: |
| 6. Aortic Valve Replacement: | E. Myectomy for IHSS: |
| 7. Mitral Valve Replacement: | F. Pericardiectomy: |
| 8. Tricuspid Valve Replacement: | G. Other Tumor Resection: |
| 9. Valve Repair: | H. Other Procedure(s): |
| 10. LV Aneurysmectomy: | 17. Minimally Invasive Procedure: |
| 11. Great Vessel Repair (Req CPB): | 18. Batista Procedure: |
| 12. Total Ischemic Time: | 19. Incision Type: |
| 13. Total CPB Time: | 20. Convert From Off Pump to CPB: NO STUDY/UN |

Select Operative Information to Edit:

Number with Radial Artery

A new prompt, "Number with Radial Artery", has been added to this data entry option. This is the number of coronary artery bypass graft (CABG) anastomoses to native coronary arteries with radial artery(ies) regardless of whether other procedures were performed. Do not leave this field blank. Enter a zero in the appropriate place if no coronary artery bypass grafts were performed with radial artery. Note that any CABG distal anastomoses performed without placing the patient on cardiopulmonary bypass are to be recorded.

Number with Other Artery

A new prompt, "Number with Other Artery", has been added to this data entry option. This is the number of coronary artery bypass graft (CABG) anastomoses to native coronary arteries with other artery(ies) regardless of whether other procedures were performed. Do not leave this field blank. Enter a zero in the appropriate place if no coronary artery bypass grafts were performed with other artery(ies). Note that any CABG distal anastomoses performed without placing the patient on cardiopulmonary bypass are to be recorded.

Incision Type

A new prompt, "Incision Type", has been added to this data entry option. The possible Incision Types include the following choices:

Limited Sternotomy: The incision cuts through a small portion (less than half of the length) of the sternum (the narrow, flat bone in the median line of the thorax in the front of the chest).

Full Sternotomy: The incision cuts through the entire length of the sternum (the narrow, flat bone in the median line of the thorax in the front of the chest).

Limited Thoracotomy: A small surgical incision through a portion of the chest wall, but not along the sternum. For example, an anterolateral thoracotomy approach may be used in LIMA to LAD grafting.

Full Thoracotomy: A larger surgical incision running across the chest wall, but not along the sternum. This may be a left submammary incision, which requires the resection of the fourth costal cartilage and /or deflation of the left lung.

Other Limited Surgical Approach: An incision or incision set used to visualize the operating field that is not listed above.

Limited Parasternal Approach: The incision cuts beside a small portion (less than 0.5 of the length) of the sternum, on a line midway between the sternal margin and an imaginary line passing through the nipple.

No Study/Unknown: NS can be entered if the incision type is unknown.

Convert From Off Pump to CPB

A new prompt, "Convert From Off Pump to CPB", has been added to this data entry option. This indicates if the procedure was begun as an off pump procedure, but changed so that CPB was used for any reason, or for any length of time.

- 1 NO - not converted from off-pump to on-pump procedure
- 2 YES - converted, but conversion was planned
- 3 YES - converted, but conversion was unplanned
- 4 YES - converted, but unknown if planned or unplanned
- 5 Not applicable (e.g., on-pump procedure)
- NS No Study/Unknown

Resource Data

[SROA CARDIAC RESOURCE]

CLAMPETT, J.D. (421-67-6565) Case #63213
AUG 1, 2000 CABG (33536-66)

| | |
|--------------------------------------|--------------------|
| 1. Hospital Admission Date: | JUL 31, 2000@17:00 |
| 2. Hospital Discharge Date: | AUG 11, 2000@10:00 |
| 3. Cardiac Catheterization Date: | |
| 4. Time Patient In OR: | AUG 01, 2000@06:00 |
| 5. Time Patient Out OR: | AUG 01, 2000@07:40 |
| 6. Date/Time Patient Extubated: | |
| 7. Date/Time Discharged from ICU: | |
| 8. Employment Status Preoperatively: | RETIRED |
| 9. Resource Data Comments: | |

Select number of item to edit:

Date/Time Patient Extubated

A new prompt, “Date/Time Patient Extubated”, has been added to this data entry option. This is the exact date and time that the endotracheal tube is pulled for the final time after the surgery. Enter NS if the date and time is unknown, and RI if the patient remains intubated >30 days after surgery.

Date/Time Discharged from ICU

A new prompt, “Date/Time Discharged from ICU”, has been added to this data entry option. This is the first date and time of the discharge from the intensive care unit (ICU). ICU is usually a surgical unit (SICU), although it may also include a post-anesthesia recovery unit off the operating room. It may also be a general ICU in which medical patients are also managed (MICU, CCU). This will always be the unit into which the patient goes immediately after surgery and is stabilized, ventilated and ultimately extubated. Do not include lower acuity units where the patient goes subsequently (i.e. stepdown, transitional care, telemetry, etc). Do not include subsequent readmissions to the ICU.

Prior to prompting for this information, the software will provide a list of all locations to which the patient was transferred during the inpatient stay associated with this surgery. This information may be used to determine the date and time of the patient’s discharge from ICU.

Postoperative Occurrences (Enter/Edit) [SRO POSTOP COMP]

For cardiac assessed cases, two additional occurrence categories are available for selection. They are NEW MECHANICAL CIRCULATORY SUPPORT and TRACHEOSTOMY.

NEW MECHANICAL CIRCULATORY SUPPORT

This category should be selected if the patient left the operating suite while dependent upon IABP or VAD for circulatory support postoperatively, even if the pump is only used for a short time postoperatively. However, this category is only appropriate if the patient did not enter the operating room with mechanical circulatory support.

TRACHEOSTOMY

This category should be selected if a procedure to cut into the trachea and insert a tube to overcome tracheal obstruction, or to facilitate extended mechanical ventilation, was performed during the postoperative hospitalization or within 30 days of surgery.

Print a Surgery Risk Assessment [SROA PRINT ASSESSMENT]

The **Print a Surgery Risk Assessment** option has been modified to display the new and updated information. Changes are highlighted in the example of the Cardiac Assessment Report that follows.

| VA CARDIAC SURGERY RISK ASSESSMENT PROGRAM | | | |
|---|-------------------------|------------------------------------|------------------|
| Patient: CLAMPETT, J.D. 421-67-6565 | | Surgery Date: 08/01/00 | |
| Assessment Number: 63213 | | Hospital Number: 521 | |
| Cardiac Surgery Contracted to Non-VA Facility: NO | | | |
| I. CLINICAL DATA | | | |
| Gender: | MALE | Resting ST Depression: | NO |
| Age: | 63 | Functional Status: | INDEPENDENT |
| Height: | 68 in | PTCI: | NONE RECENT |
| Weight: | 95 kg | Prior MI: | NONE |
| Diabetes: | NO | Prior Heart Surgery: | NO |
| COPD: | YES | Peripheral Vascular Disease: | NO |
| FEV1: | 1.5 liters | Cerebral Vascular Disease: | NO |
| Cardiomegaly (X-ray): | NO | Angina (use CCS Class): | III |
| Pulmonary Rales: | NO | CHF (use NYHA Class): | II |
| Current Smoker: | NO | Current Diuretic Use: | NO |
| Creatinine: | 1 mg/dl | Current Digoxin Use: | NO |
| Hemoglobin: | 15.3 g/dl | IV NTG 48 Hours Preceding Surgery: | NO |
| Serum Albumin: | NO g/L | Preop Use of IABP: | NO |
| Active Endocarditis: | NO | Hypertension: | NO |
| II. CARDIAC CATHETERIZATION AND ANGIOGRAPHIC DATA | | | |
| Cardiac Catheterization Date: 07/24/97 (This field has been moved on the report.) | | | |
| LVEDP: | 12 mm Hg | Left Main Stenosis: | 40% |
| Aortic Systolic Pressure: | 100 mm Hg | LAD Stenosis: | 80% |
| *PA Systolic Pressure: | NS mm Hg | Right Coronary Stenosis: | 90% |
| *PAW Mean Pressure: | NS mm Hg | Circumflex Stenosis: | 0% |
| Mitral Regurgitation: | NONE | | |
| LV Contraction Grade (from contrast or radionuclide angiogram or 2D Echo): | | | |
| Grade | Ejection Fraction Range | Definition | |
| II | 0.45-0.54 | MILD DYSFUNCTION | |
| III. OPERATIVE RISK SUMMARY DATA (Operation Began: 08/01/00 06:10) | | | |
| Physician's Preoperative | | (Operation Ended: 08/01/97 16:50) | |
| Estimate of Operative Mortality: 5% | | (08/07/00 06:51) | |
| ASA Classification: | 4-LIFE THREAT | | |
| Surgical Priority: | ELECTIVE | | (07/31/97 08:37) |
| Principal CPT Code: 33518 | | | |
| Other Procedures CPT Codes: 33533-82 | | | |
| Preoperative Risk Factors: | | | |
| IV. OPERATIVE DATA | | | |
| Incision Type: FULL THORACOTOMY | | | |
| A. Cardiac Procedures Requiring Cardiopulmonary Bypass | | | |
| CABG Distal Anastomoses | | Cardiac Transplant: NO | |
| Number with Vein: | 2 | Electrophysiologic Procedure: NO | |
| Number with IMA: | 1 | Misc. Cardiac Procedures | |
| Number with Radial Artery: | 0 | ASD Repair: NO | |
| Number with Other Artery: | 0 | VSD Repair: NO | |
| Number with Other Conduit: | 0 | Myxoma Resection: NO | |
| Aortic Valve Replacement: | NO | Foreign Body Removal: NO | |
| Mitral Valve Replacement: | NO | Myectomy for IHSS: NO | |

| | | | |
|--------------------------------|-----|-------------------------------|-------------|
| Tricuspid Valve Replacement: | NO | Pericardiectomy: | NO |
| Valve Repair: | NO | Other Tumor Resection: | NO |
| LV Aneurysmectomy: | NO | Minimally Invasive Procedure: | NO |
| Great Vessel Repair (Req CPB): | NO | Batista Procedure: | NO |
| Total Ischemic Time (minutes): | 34 | Other Procedure(s): | NO |
| Total CPB Time (minutes): | 125 | Convert Off Pump to CPB: | YES-PLANNED |

B. Operative Death:

Date of Death:

C. Perioperative (30 day) Occurrences

| | | | |
|------------------------------------|----|---------------------------------|----|
| Perioperative MI: | NO | Reoperation for Bleeding: | NO |
| Endocarditis: | NO | On Ventilator > or = 48 Hours: | NO |
| Renal Failure Requiring Dialysis: | NO | Repeat Cardiopulmonary Bypass: | NO |
| Low Cardiac Output > or = 6 Hours: | NO | Coma > or = 24 Hours: | NO |
| Mediastinitis: | NO | Stroke/CVA: | NO |
| Cardiac Arrest Requiring CPR: | NO | Tracheostomy: | NO |
| | | Mechanical Circulatory Support: | NO |

V. RESOURCE DATA

| | |
|--------------------------|----------------|
| Time Patient In OR: | 08/01/00 06:00 |
| Time Patient Out OR: | 08/01/00 07:40 |
| Hospital Admission Date: | 07/31/00 17:00 |
| Hospital Discharge Date: | 08/11/00 10:00 |

Date and Time Patient Extubated:

Date and Time Patient Discharged from ICU:

Resource Data Comments:

VI. Socioeconomic Data

Employment Status Preoperatively: RETIRED

*** End of report for CLAMPETT, J.D. 421-67-6565 assessment #63213 ***

Print 30 Day Follow-up Letters [SROA REPRINT LETTERS]

This option is enhanced to allow the modification of text contained within the 30-Day Follow Up Letter. The text is stored in a new word-processing field in the SURGERY SITE PARAMETERS file (#133). Therefore, each division at a multi-divisional facility may have its own 30-day letter. To edit the text of the letter for the division selected at sign-on, enter YES at the prompt as shown below. Otherwise, press the ENTER key to accept the default of NO.

Select Surgery Risk Assessment Menu Option: **F** Print 30 Day Follow-up Letters

Do you want to edit the text of the letter? NO// **YES**

Division: ISC-BIRMINGHAM, AL (521)

NSQIP 30 DAY FOLLOW-UP LETTER: . . .
. . .

Please return this letter whether or not you have had any medical problems. Your health and opinion are important to us. Thank You.

Sincerely,

Surgical Clinical Nurse Reviewer

Edit? NO//

.
. .
. .

ASA Classifications

Two additional ASA Classes are added to facilitate removal of organs from patients who have been declared brain-dead. The choices for ASA Class are listed below. The two new choices are highlighted.

- 1 NO DISTURB.
- 1E NO DISTURB-EMERG
- 2 MILD DISTURB.
- 2E MILD DISTURB.-EMERG
- 3 SEVERE DISTURB.
- 3E SEVERE DIST.-EMERG.
- 4 LIFE THREAT
- 4E LIFE THREAT-EMERG.
- 5 MORIBUND
- 5E MORIBUND-EMERG.
- 6 BRAIN-DEAD**
- 6E BRAIN-DEAD-EMERG.**